## REMARKS

This Amendment is responsive to the Office Action mailed May 5, 2005. Accordingly, the Amendment is accompanied by a petition to extend the time for response by 1 month, together with the required fee.

Applicant acknowledges the allowance of claim 8, and the allowability of claims 6 and 23 if rewritten so as not to depend from rejected claims.

Claim Objections

Claims 4 and 21 have been amended to correct their dependencies. Applicant thanks the examiner for his attention in noting these errors.

Section 102 Rejections

Claims 15, 16, and 18 stand rejected under 35 USC §102(b) as being anticipated by Mallinson, U.S. Patent No. 4,233,901 ("Mallinson"). Applicant respectfully traverses the rejections because it is clear that Mallinson does not disclose the claimed invention. Claims 15, 16, and 18 have all been amended; however, the amendments were not necessitated by Mallinson as will be clear from the discussion to follow.

The Claimed Invention

Claims 15, 16, and 18, both before and after amendment, pertain to controlling the flow of pressurized gas directed onto a traveling sheet, for drying the sheet.

Mallinson

Mallinson discloses an apparatus for drying web material printed by a rotary printing press. Col. 2, lines 37 - 39. The purpose of Mallinson is to evacuate dangerous gases from a room in which a printing press is operating so as to prevent explosions. It is not directed to controlling the drying of ink applied to a web of material. To that end, Mallinson discloses:

(1) A device produces a web-drying flow of pressurized air, the device having a suction side, a discharge side, and a duct (7) for discharging the web-drying flow of pressurized air from the discharge side. Col. 2, lines 39 - 43.

(2) Means comprising a duct (9) and a plenum chamber with air-outlet nozzles direct heated air on to the web. Col. 2, lines 43 - 45.

(3) Collecting means comprising a hood collects solvent mixture resulting from the web-drying operation as well as fresh air present in the room. Col. 2, lines 46 - 49.

(4) The apparatus further comprises outlet means including ducts (15) and (16) for allowing outflow of the collected solvent mixture from the hood. Valves control flow through the outlet ducts (15) and (16) as well as a fresh air inlet means. Col. 2, lines 56 - 57.

The valves are operable by motors, and the motors are connected to a L.E.L. ("lower explosive limit") sensing control box which makes use of a L.E.L. sensing device disposed between the ducts (15) and (16). Col. 3, lines 30 - 35. The sensing device is sensitive to changes in the air to solvent ratio of the solvent mixture being collected by the hood, and is operable to adjust the valves whereby flow through the outlet ducts (15) and (16) is controlled automatically. Col. 3, lines 40 - 44.

Accordingly, Mallinson discloses two basic elements: (a) a drying subsystem comprising a

plenum through which a flow of web-drying pressurized air is passed onto a web, and (b) an exhaust subsystem comprising collecting means including a hood for collecting solvent mixture evaporating from the web as it dries along with fresh air from the room ( "outflow") and outlet means including two ducts for exhausting the outflow.

The automatically controlled valves in Mallinson are provided in the exhaust subsystem (b) and not the drying subsystem (a). By contrast, the rejected claims clearly recite that the claimed fluid flow valves control the flow of pressurized gas through the plenum used for drying. Mallinson fails to comprehend the use of any valves, automatically controlled or not, for controlling the flow of the pressurized gas that is applied to the web for drying the web. Therefore, Mallinson fails at the most basic level to contemplate, let alone anticipate, the claimed invention.

For example, to control the flow of the gas used to dry ink in response to information about the amount of ink to be dried, it is axiomatic that the information must be known prior to the time the gas is actually expelled from the plenum and applied to the ink. Mallinson is incapable of providing such information in advance of printing; the sensing device in Mallinson is responsive to solvent that has already evaporated, and therefore which represents ink that has already been dried.

Claims 15, 16, and 18 have been amended to remove unnecessary limitations.

Section 103 Rejections

Claims 2, 17, and 19 - 20 stand rejected under 35 USC §103 as being unpatentable over Mallinson in view of Briggs, U.S. Patent No. 5,190,201 ("Briggs"). The rejections are based at least in part on the assertion above that Mallinson discloses the subject matter of claim 15. Since that assertion has been shown to be incorrect, it is respectfully submitted that the rejections are moot.

However, even if Mallinson did disclose all that is alleged, it would still not have been obvious to modify Mallinson in view of Briggs. First, neither Mallinson nor Briggs disclose any structure pertinent to controlling the flow of pressurized air used for drying. As explained above, Mallinson pertains to controlling the flow of exhaust gas out of a room in which a printing press is operating, to keep the level of explosive evaporant at a safe level, while Briggs pertains to detecting the occurrence of a web break within a web drying unit. Neither reference teaches or suggests providing variable flow of pressurized gas used for drying, whether automatically or by any other means. Second, in order to effectuate its purpose of detecting web breaks, Briggs actually teaches against providing variable flow of pressurized gas used for drying.

Briggs

Particularly, Briggs discloses a web-fed printing system including a printing press having a plurality of serially disposed conventional printing units. Col. 3, lines 49 - 51. The printing units cooperate to imprint multi-color images on the upper and lower surfaces of a web. Col 4, lines 1 - 2. Each printing unit includes an upper blanket cylinder and a lower blanket cylinder. Col. 3, lines 53 - 56. The spongy circumferential surface of a blanket cylinder applies ink to the web. Col. 4, lines 53 - 54.

A dryer (112) is downstream of the printing units. Col. 4, lines 19 - 20. A web break which occurs near the exit of the dryer but which is not detected until the broken web is drawn back through the dryer may result in wrapping the blanket up to 16 times, permanently damaging the blanket. Col. 46 - 52.

The dryer comprises upper and lower surfaces upon which a plurality of equally spaced,

laterally extending air bars (130, 132) are mounted. Each air bar (132) mounted on the lower surface is interposed midway between each air bar (130) mounted on the upper surface as is known in the art. Col. 4, lines 61 - 66. In this configuration, the web approximates a sinusoidal path as it travels through the dryer. Col. 4, lines 67 - 68.

High pressure air is discharged from the air bars, creating a cushion pressure that is maintained at a level sufficient to stabilize the web along the entire length of the dryer. Col. 5, lines 35 - 40. As a result, the distance between the web and the free end of each air bar is maintained within a range of approximately 1/4 to ½ inch. Col. 5, lines 40 - 43.

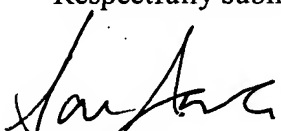
Maintenance of the cushion pressure is predicated upon maintenance of web tension which, in turn depends on the presence of an intact web; thus if the web breaks, cushion pressure quickly drops. Col. 5, lines 44 - 47. By monitoring the magnitude of the cushion pressure and the ambient pressure, a web break may be quickly detected. Col. 5, lines 47 - 51.

The examiner alleges that Briggs discloses the air bars providing substantially different ranges of laterally extending coverage (claims 2 and 20), and two separate plenums and corresponding respective independently controllable valves (claims 17 and 19). In fact, Briggs discloses neither: Briggs discloses a plurality of air bars having identical ranges of laterally extending coverage, and the air bars are apparently controlled by the same valve since Briggs teaches to maintain an essentially constant "cushion pressure" throughout the dryer. Moreover, Briggs' requirement to maintain an essentially constant cushion pressure in order to provide for detecting web breaks teaches against providing a variable gas flow rate through one or more drying plenums in response to changes in the amount of ink deposited or changes in required drying energy as claimed.

Claims 4 - 5 and 21 - 22 stand rejected under 35 USC §103 as being unpatentable over Mallinson in view of Briggs and further in view of Kolb, U.S. Patent No. 5,791,247 ("Kolb"). It is respectfully submitted that the rejections are moot in view of the showing above that neither Mallinson nor Briggs disclose what is alleged in the Office Action. It has been previously pointed out (Submission Under 37 CFR 1.114) that Kolb does not disclose automatically controlled valves. Moreover, while it is true that Kolb discloses individually adjusting the flow of air through each of two nozzles used to direct streams of air toward the tops of printed materials moving from a printing press, it does not follow that adjustments would be made to provide for more of the pressurized gas to flow through one of the nozzles than the other such as would be required by claim 4, for example. The adjustments described in Kolb would typically be required in any real world system just to initially provide (e.g., at set-up), or just to maintain that the *same* amounts of pressurized gas flow through two separate nozzles that are not identical, or that do not experience identical operating conditions.

For all of the foregoing reasons, it is respectfully submitted that claims 2, 4 - 6, 8, and 15 - 28 remaining in this case patentably distinguish over the references of record, and the examiner is respectfully requested to allow all of the remaining claims and pass this case to issue.

Respectfully submitted,



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